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The impact of preferences for clinical and management leadership roles on the willingness to apply for a medical leadership position: Analysis of gender differences among a sample of German senior-physicians

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Abstract:	<p>Background: The hybrid role (clinical and managerial leadership tasks) of physicians in medical leadership positions (MLPs) is a driver of the attractiveness of these positions. The increasing feminization of the medical profession makes gender-related preferences for hybrid roles relevant.</p> <p>Purpose: The current study uses the (EPL) career aspirations framework to analyze the (gender-related) effects that efficacy beliefs, motivations, and preferences for clinical leadership and managerial leadership have on the willingness of chief physicians to apply for an MLP.</p> <p>Methodology: A survey of senior physicians in German university hospitals yielded a sample size of N = 496. The resulting data were analyzed using a structural equation modeling approach.</p> <p>Findings: The results confirm the low preference for MLPs among senior physicians, which is mainly affected by preferences for managerial leadership tasks. Female senior physicians perceive the position of an MLP to be less attractive than their male counterparts do, and female physicians' willingness to apply for an MLP is concurrently driven by their preferences for clinical leadership and managerial leadership tasks.</p> <p>Practical Implications: Mentoring programs could boost female senior physicians' preparedness for MLPs. Further, flexibility in fulfilling managerial leadership tasks could be promoted to make MLPs more attractive to women.</p>

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The impact of preferences for clinical and managerial leadership roles on the willingness to apply for a medical leadership position: Analysis of gender differences among a sample of German senior physicians

Proof

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Abstract

Background: The hybrid role (clinical and managerial leadership tasks) of physicians in medical leadership positions (MLPs) is a driver of the attractiveness of these positions. The increasing feminization of the medical profession makes gender-related preferences for hybrid roles relevant.

Purpose: The current study uses the (EPL) career aspirations framework to analyze the (gender-related) effects that efficacy beliefs, motivations, and preferences for clinical leadership and managerial leadership have on the willingness of chief physicians to apply for an MLP.

Methodology: A survey of senior physicians in German university hospitals yielded a sample size of N = 496. The resulting data were analyzed using a structural equation modeling approach.

Findings: The results confirm the low preference for MLPs among senior physicians, which is mainly affected by preferences for managerial leadership tasks. Female senior physicians perceive the position of an MLP to be less attractive than their male counterparts do, and female physicians' willingness to apply for an MLP is concurrently driven by their preferences for clinical leadership and managerial leadership tasks.

Practical Implications: Mentoring programs could boost female senior physicians' preparedness for MLPs. Further, flexibility in fulfilling managerial leadership tasks could be promoted to make MLPs more attractive to women.

Keywords: hybrid roles; medical leadership; hospitals; gender roles; self-efficacy; career paths

Introduction

Clinician involvement in hospital leadership positions is associated with improved clinical and financial performance and aims to reduce the divide between professional and managerial logistics in hospitals¹. Depending on the healthcare system, physicians in leading positions are named medical managers, clinical directors or chief physicians and fulfill this position either in addition to or instead of their professional role in clinical practice.² However, recruiting and engaging physicians in formal leadership roles at the executive level in hospitals is a critical issue in hospital management worldwide.³ In addition to a lack of the necessary skills, expertise, preparedness, and time, the hybrid—and often conflicting—nature of these roles has been identified as a major obstacle in striving for and fulfilling these positions.^{1,2,4} This role ambiguity is explained (1) by inner conflicts between the professional socialization of physicians and the perceived negative consequences of managerialism in healthcare and (2) by the need to balance the competing clinical and managerial logistics in a hospital.² Consequently, the preference to take on medical leadership positions (MLPs) should be determined by the interplay of competence beliefs and motivations related to both professional and management responsibilities. However, a rigid empirical validation of physicians' willingness to apply (WTA) for an MLP based on a sound theoretical model has been missing. To close this research gap, the present study uses a modified version of the entrepreneurial, professional, and leadership (EPL) career aspirations framework that was developed by Chan et al.⁵ to explain the WTA for an MLP. The framework adapted to the current context includes efficacy beliefs and motivations regarding clinical leadership and managerial leadership tasks as well as their interrelations.

Senior physicians in German hospitals and their decisions to take the next career step towards a chief physician position are good study subjects for analyzing the interplay between preferences, motivations and self-efficacy beliefs in the WTA for an MLP. In recent years,

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despite growing demand,⁴ the number of senior physician applicants for chief physician positions in hospitals in Germany has significantly declined. While senior physicians are mainly responsible for a definite number of wards and units in terms of routine clinical decision making and a limited number of administrative duties, the chief physician position is responsible for the economic performance of a clinical department, including external representations, financial responsibility, strategic positioning and key account management. Therefore, chief physicians spend the majority of their working time on management tasks.⁴ The greater responsibility inherent in the position of a chief physician is associated with a significant increase (up to 100%) in compensation compared to that of the senior physician position and a higher hierarchical level. However, a large number of skilled and qualified hospital physicians avoid this career step and remain in lower hierarchical positions.⁶

An important second stream of healthcare management research has examined gender-specific differences in preferences for and the occupancy rates of MLPs.⁷ Worldwide, women are underrepresented in MLPs. They have to cope with disrespect and discrimination in their career paths.⁷ Further, pregnancy risk and part-time work due to motherhood result in lower availability in the hospital and subsequently fewer career opportunities.⁸ However, to date, only a few studies have focused on explanations regarding gender-specific differences in the career aspirations of physicians and the underlying motives of women to apply for leadership positions.^{7,9,10} A confidence gap between men and women has been considered as one explanation.¹¹ Moreover, a lack of leadership training and mentoring programs has been mentioned.⁷ These findings are in line with general research findings on gender differences in leadership.¹² Currently in Germany, two-thirds of medical graduates are women; however, only approximately 10% of physicians in MLPs are female.⁷ Therefore, research on hybrid roles needs to account for gender differences in motivations, preferences and self-efficacy beliefs.

Hence, the current study addresses the following research questions:

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RQ1: Do the preferences of senior physicians towards clinical leadership and managerial leadership tasks affect their WTA for an MLP?

RQ2: Do specific efficacy beliefs and motivations related to clinical and managerial leadership tasks affect preferences for these leadership roles and WTA for an MLP?

RQ3: Do gender-related differences exist in the motivations, self-efficacy beliefs, and preferences towards clinical and managerial leadership and their interrelations?

Conceptual considerations

The EPL career aspirations framework developed by Chan et al.⁵ aims to explain the career aspirations of persons at any point in their career path. The model is based on a career concept that includes the entire scope of different work experiences regarding the three career dimensions of a person's working lifetime.⁵ The framework considers the individual perceptions and evaluations of each employee's future career path extended in a three-dimensional EPL space and distinguishes among entrepreneurial, professional and leadership vectors. Each of the three dimensions considers the task-specific motivations, self-efficacy beliefs and behavioral intents that are assumed to influence the pursuit of different career paths.

Using the EPL framework, this study includes relevant factors from other career development theories.¹³ In social cognitive career theory and life-span theory, career development is explained by personal inputs (including gender), contextual factors (such as mentoring), self-efficacy beliefs, interests and goals as part of a cognitive-behavioral process. Life-span theory additionally considers one's specific career stage along his or her career path.¹³ According to the broader perspective of career construction theory, individual characteristics (e.g., personality, motivation) allow people to successfully integrate their self-concepts with the expected work roles of a job position given individual differences in their ability and willingness to adapt to the new roles and tasks.

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Furthermore, the propositions of the EPL model correspond with findings from research on individual leader differences that show that leadership learning capacities (e.g., self-efficacy) and fundamental traits (e.g., motives and values) explain leadership capacities (preferences and motivational orientations) along the career path.¹⁴

Since the focus of this study is on the career path of candidates for MLPs, the original framework needs to be adapted to these conditions.¹⁵ First, considering that the focus of this study is on medical leaders as hospital employees, the current study ignores the entrepreneurial vector.

Second, the dual role of medical leaders includes both leadership and management tasks in professional medical work and business management tasks as directors of a medical department.^{2,16} In our study, we refer to these as clinical leadership and managerial leadership, respectively. The clinical leadership role relates to the professional vector of Chan's framework. This role includes defining clinical guidelines and assigning tasks within the medical department. The leadership role as a director of a department and the related business management tasks (e.g., financial responsibility) reflect the leadership dimension of the EPL framework.

This model provides a proper theoretical basis for the analysis of preferences for a medical leadership career because (1) Chan et al.⁵ themselves stress that the framework reflects the hybrid working environments of doctors that have to handle managerial tasks, which were not part of their professional training, in addition to clinical tasks. (2) Various international physician competency frameworks for leadership roles, such as the CanMEDS model, the Medical Leadership Competency Framework in the UK and the "Nationaler Kompetenzbasierter Lernzielkatalog Medizin (NKLM)" in Germany, differentiate between managerial skills and medical skills.²

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According to Chan et al.'s framework,⁵ preferences for dual leadership roles (management and clinical leadership), which are assumed to influence WTA for an MLP (see hypotheses H₁ and H₂), are contingent upon the senior physician's motivations and leadership-specific efficacy beliefs.

The preference factors are based on personal identification with the dual leadership role of this next career step. These factors affect the desire to apply for an MLP and intensity and perseverance in applying. Since people rarely pursue career paths for which they lack the necessary expertise, the efficacy factor represents the effect of subjectively held beliefs on the ability to cope with certain leadership tasks.⁵ Guillén, Mayo and Korotov¹⁷ identified leadership efficacy as an antecedent of leadership motivation. Ziegler et al.¹⁸ find that self-efficacy beliefs have an influence on preferences for leading positions in hospitals. Moreover, we predict that the relationship between efficacy and preferences for clinical/managerial leadership is mediated by motivation (H_{5a/b}) because specific competencies lead to behavioral intentions only in the case of high motivation.¹⁹ Within this context, motivation is defined as the individual's willingness to exert and maintain effort towards accomplishing managerial and clinical leadership tasks to achieve individual and organizational goals.²⁰

Furthermore, considering our previous hypotheses that efficacy constructs have a positive effect on the corresponding preferences (see hypotheses H_{3b} & H_{4b}) and that these variables, in turn, have a positive effect on the WTA for an MLP (see hypotheses H₁ & H₂), we also assume that preference constructs act as mediators (H_{5c/d}). We assume that leadership-specific efficacy is not sufficient to directly influence application intentions.¹⁹

Hence, in addition to the components of the original model, we extend the basic EPL career aspirations framework to include senior physicians' perceived preparedness for MLPs as a contextual factor that indicates the extent to which senior physicians feel empowered to pursue future chief physician positions by their employer (H₆).

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Further, we assume gender-related differences in the construct levels. Studies of gender-related differences related to leadership preferences explain these differences through individual, organizational and social factors.²¹ According to the study of Ellinas et al.,²² women's barriers to pursuing leadership positions largely revolve around internal obstacles, which indicates the relevance of individual factors for gender differences in leadership aspirations.

The study of Ziegler et al.¹⁸ provides support for the existence of lower self-efficacy beliefs among female physicians. This is in line with findings from central reviews in the field of gender differences.^{7,23} Therefore, we assume lower self-efficacy beliefs related to clinical leadership/managerial leadership ($H_{7a/b}$) among female senior physicians.

In line with the poor conditions for female physicians in postgraduate medical education and the related reduced support for their careers by responsible mentors found by the abovementioned studies¹⁸, we assume that females perceive themselves as less prepared for the position of chief physician than male senior physicians do (H_{7e}). In general, studies have shown that motivation for leadership tasks is higher among males²¹, which suggests higher motivations for both types of leadership roles among male senior physicians ($H_{7c/d}$). Further, the proposed gender-specific self-efficacy beliefs may promote these differences as well. The study of Diderichsen et al.²⁴ shows that female physicians value the work- and time-related aspects of their jobs more and are more patient oriented than their male peers. The latter have a stronger preference for technical challenges, a high salary, and prestige. Therefore, we hypothesize lower preferences for both leadership roles ($H_{7f/g}$), resulting in a lower WTA for a chief physician position (H_{7h}) among female senior physicians. With respect to the interrelations of the variables within the EPL framework, we assume that these apply to the cognitive processes of female as well as male senior physicians.²⁵

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The conceptual framework in Figure 1 shows the precisely assumed interrelations and related hypotheses.

Figure 1 about here

Method

An online questionnaire was sent out by email to senior physicians in 12 out of 36 German university hospitals. The email addresses of the senior physicians were identified on the websites of the targeted hospitals. These hospitals were chosen with the goal of including a representative sample of German university hospitals with respect to their regional distribution across Germany. The data were collected in the second half of 2017.

A total of 2,476 senior physicians were contacted. With a response rate of 20.03%, the final sample consisted of $N = 496$ senior physicians. A total of 45.6% of the senior physicians surveyed worked in surgical specializations, and 54.4% worked in non-surgical fields. A total of 145 of the interviewees were female senior physicians (29.2%), which is in line with the proportion of female physicians among senior physicians at university hospitals (31%) (German physician statistic 2019). The mean age of the respondents was 44.4 years ($SD = 6.7$ years), which corresponds to the 2019 German physician statistics. The original sample was reduced to 455 on a case-wise basis due to missing values.

This study uses the scales from the EPL framework.⁵ Both managerial leadership efficacy and clinical leadership efficacy were assessed based on four statements with a scale anchored by 1 ("not at all competent") to 5 ("very competent"). The measurement instruments assessing motivation and task-specific preferences used 5-point Likert scales ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Managerial leadership motivation was measured based on

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two items. Clinical leadership motivation was evaluated based on three items. Preferences for clinical leadership were assessed with two items, and preferences for performing managerial leadership tasks were assessed with three items. The WTA for an MLP and the assessment of preparedness for such a position were both measured with single-item instruments. Table 1 depicts all question items.

Table 1 about here

Results

Descriptive Statistics and Reliability and Validity Indicators

Table 2 depicts the descriptive statistics for all latent constructs as well as the reliability and validity indicators. The Cronbach's α value and the composite reliability statistic reveal reliable measurements for the latent constructs considered. The AVE statistics show convergent validity. The Fornell-Larcker ratios are below 1.00 and indicate the discriminant validity of the measurements. To check whether common method bias has worsened the measurement results, an exploratory factor analysis with all items was conducted in advance of the PLS SEM analysis. Five factors with an eigenvalue greater than 1 were extracted. Furthermore, the first extracted factor explained only slightly more than 23% of the variance of the initial question items. Following the logic of the Harmann single factor test, these results do not indicate a pronounced problem due to common method bias.

Table 2 about here

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Total Model

A partial least squares structural equation modeling (PLS SEM) approach was applied to validate the delineated model using SmartPLS 3.0 software.²⁶ PLS SEM has advantages over covariance-based SEM methods (e.g., LISREL).²⁷ In particular, and as an important prerequisite for the subsequent gender-specific group analysis, PLS SEM allows us to account for binary moderators.

Table 3 about here

Table 3 reports the estimated path coefficients. In line with hypothesis H₁, preferences for managerial leadership tasks have a positive effect on WTA for a chief physician position. Contrary to hypothesis H₂, clinical leadership preferences do not affect WTA. In line with hypothesis H₆, preparedness for the chief physician position has a positive impact on WTA. In line with hypotheses H_{3a} and H_{3b}, managerial leadership efficacy beliefs positively affect managerial leadership motivation preferences. Moreover, and in line with hypothesis H_{3c}, managerial leadership motivation has a significant positive effect on managerial leadership preferences. The effects of efficacy beliefs regarding clinical leadership on clinical leadership motivation and clinical leadership preferences are in line with hypotheses H_{4a} to H_{4c}.

The study estimated 95% bootstrap intervals for the indirect effects of managerial leadership and clinical leadership efficacy to test hypotheses H_{5a} to H_{5d} regarding mediating effects. Table 4 depicts the specific indirect effects of the efficacy constructs on the task-specific preference constructs and on WTA for an [MLP](#). The table reveals that the motivational constructs have pronounced mediating effects on the relation between task-specific efficacy beliefs and task preferences (hypotheses H_{5a} and H_{5b}). In addition, the analysis reveals a significant overall indirect effect of managerial leadership efficacy on WTA for an [MLP](#). There

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is no total mediation effect of clinical leadership efficacy on WTA because of the missing relationship between clinical leadership preferences and WTA. Consequently, hypothesis H_{5c} can be confirmed. In contrast, hypothesis H_{5d} cannot be confirmed.

Table 4 about here

Gender-Specific Group Analysis

The mean values of the latent variables between female and male respondents were analyzed for significant differences using ANOVA (Table 2). The results ($F=4.865$, $p < 0.05$) confirm hypothesis H_{7e} that female senior physicians (mean = 2.54) feel significantly less prepared for MLPs than their male counterparts do (mean = 2.80). Furthermore, males (mean = 3.59) showed a significantly higher WTA ($F=43.887$, $p < 0.01$) for MLPs than female senior physicians (mean = 2.75), which is in line with H_{7h}. No differences appear between male and female senior physicians with regard to self-efficacy beliefs, leadership motivations or leadership preferences. Therefore, hypotheses H_{7a}-H_{7d} and H_{7f/g} must be rejected.

Before conducting the gender-specific group analysis to identify differences in path coefficients, the measurement invariance between female and male interviewees was assessed by applying a three-step measurement invariance of composite models (MICOM) procedure.²⁸ In the first step, configural invariance could be assumed by design because the same model setup, data treatment and algorithm were considered for the male and female model estimations. Steps 2 and 3 were based on permutation approaches. With regard to the second step, we confirmed invariance for all latent constructs. More precisely, the MICOM approach revealed no differences in the latent variables. The third step revealed some problems with regard to the “WTA for an MLP” and the “clinical leadership efficacy” constructs. In sum, the PLS SEM

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results can be compared across the two genders; however, interpretation of the study results for the two latent variables mentioned above must be made carefully.

All R^2 values for female respondents are higher than those for male respondents. More precisely, in terms of managerial leadership motivation ($R^2_{Female} = .384$ vs. $R^2_{Male} = .272$), preferences for managerial leadership ($R^2_{Female} = .418$ vs. $R^2_{Male} = .236$), and clinical leadership motivation ($R^2_{Female} = .326$ vs. $R^2_{Male} = .190$), the coefficients of determination are significantly different between genders.

Table 5 shows the differences in the gender-specific path coefficients and path sizes that resulted from the group analysis. Only two path coefficients are nonsignificant among the female respondents. The first is the path coefficient for preferences for clinical leadership tasks on the WTA for an MLP. Second, the negative effect of clinical leadership motivations on the WTA for an MLP is significant only among female respondents. Furthermore, the following four positively valued path coefficients are significantly greater for female respondents: the effect of managerial leadership efficacy on managerial leadership motivation, the effect of managerial leadership efficacy on managerial leadership preferences, the effect of clinical leadership efficacy on clinical leadership motivation, and the effect of clinical leadership motivation on clinical leadership preferences. Interestingly, the negative effect of clinical leadership efficacy on the WTA for an MLP is significant only for male interviewees. Finally, the effect of clinical leadership efficacy on the preference for clinical leadership is significantly stronger for males.

Table 5 about here

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Conclusion

Summary of study results

The results of this study confirm the actual low responsiveness of potential applicants to vacant chief physician positions in Germany.⁶ Based on the results of the EPL career aspirations model,⁵ this study makes significant contributions to the literature by explaining the relevance of hybrid roles (clinical and managerial leadership) on the WTA for an MLP in the context of the medical leadership system in German hospitals. The significantly lower preference for undertaking managerial leadership tasks than for clinical leadership tasks confirms the findings from recent reviews about physicians' reluctance to take on managerial roles.² Similarly, this study confirms the perceptions of physicians that they are unprepared for this position², which in turn is an important driver of striving for an MLP as a chief physician. Interestingly, the senior physicians in the sample population rated their self-perceived managerial leadership efficacy approximately as high as they rated their clinical leadership efficacy. Therefore, our results seem to contradict the findings^{1,2,4} that physician leadership and management skills must be promoted to increase self-efficacy beliefs. This result may be partially explained by the formal administrative duties senior physicians already have in their positions in the German hospital context. The main driver of striving for an MLP in our model is a preference for managerial leadership tasks, which confirms the finding that motivation to be a leader is the most important personal characteristic a medical leader should possess.²

Although we cannot explain the rationale behind this effect based on the data, the result supports the relevance of promoting opportunities associated with the management side of hybrid roles to cultivate career aspirations as medical leaders.¹ The negative and partly nonsignificant effects of clinical leadership efficacy, motivation and preferences on the WTA for an MLP reveals that senior physicians with high aspirations for their professional discipline

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may have a lower willingness to take over medical leadership roles in which management tasks predominate.

We find pronounced gender-specific differences in our sample. For female senior physicians, both preferences for clinical leadership tasks and preferences for managerial leadership tasks positively affect their WTA for an MLP. However, female senior physicians show a significantly lower willingness to strive for this position in their career path than male senior physicians do, which is in line with the results of previous research in this field.¹⁸ This may be due to a significantly lower self-perception of preparedness for the challenges of this position or to the aspects considered by Carr⁹ regarding female family demands and responsibilities.

Limitations and avenues for future research

First, instead of focusing on actual job-seeking behavior, we considered individual WTA for an MLP. Second, the representativeness of the results may be negatively affected by the sampling procedure used. Nevertheless, the present study is based on a large sample of senior physicians, and a such a large sample of senior physicians is rare in healthcare management research. Third, PLS SEM represents an approach that is rather less suitable for hypothesis testing than covariance-based approaches. However, the female subsample in our multigroup analysis is so small (N = 145) that, in our opinion, covariance-based approaches cannot be applied. Fourth, the results of the present study may possibly be distorted by common method bias. Even though pronounced problems can be excluded based on the Harmann single factor test, this type of distortion should be taken into account in future large studies with the help of, for example, the marker method. Such methods are not possible within the framework of PLS SEM. In addition, future studies could try to link survey data to other secondary data (e.g., enrollment in management education courses). Fifth, the single-item measures in our study may have limited

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validity because they may not be able to capture the multidimensionality of the constructs. Finally, as the permutation test shows, measurement invariance across female and male respondents cannot be fully assumed. Hence, the gender-specific results must be interpreted with caution.

Practical Implications

Given that the main driver of striving for an MLP is the preference for managerial leadership tasks, the first recommended course of action in hospital management would be to paint a positive picture of the managerial leadership tasks of MLPs by stressing the positive impact of management measures on clinical practices and the opportunities for improving, innovating and developing the clinical department as an organization and optimizing clinical pathways that are associated with the position¹. In this way, it may even be possible to change the mindsets of physicians in leadership positions away from the idea that they have a conflicted hybrid role towards the idea that they have a hybrid role with complementary clinical and management tasks.

The second recommended course of action is to focus directly on senior physicians' needs and preferences by reducing the workload of MLPs regarding managerial leadership tasks whenever possible. Possible models to be tested for their applicability in this context are the team doctor model and the organizational professionalism model.²

Third, this study implies that in recruitment processes, potential candidates for MLPs who already demonstrate preferences for management tasks should be preselected by being involved in projects related to the optimization and development of the structures, processes and quality outcomes in a hospital.²⁹

With the growing feminization of the medical professional, the needs and preferences of female senior physicians and their WTA for MLPs are becoming increasingly important.¹⁸

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According to our study results, female senior physicians perceive a greater potential to combine clinical and managerial leadership tasks in an [MLP](#). However, they feel less prepared to fulfill the demands of the position. Mentoring programs could boost female senior physicians' preparedness for [MLPs](#). The necessary growth of and trust in one's own abilities could be best achieved and fostered through suitable coaching and training programs.⁷

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Figure 1. Conceptual Framework

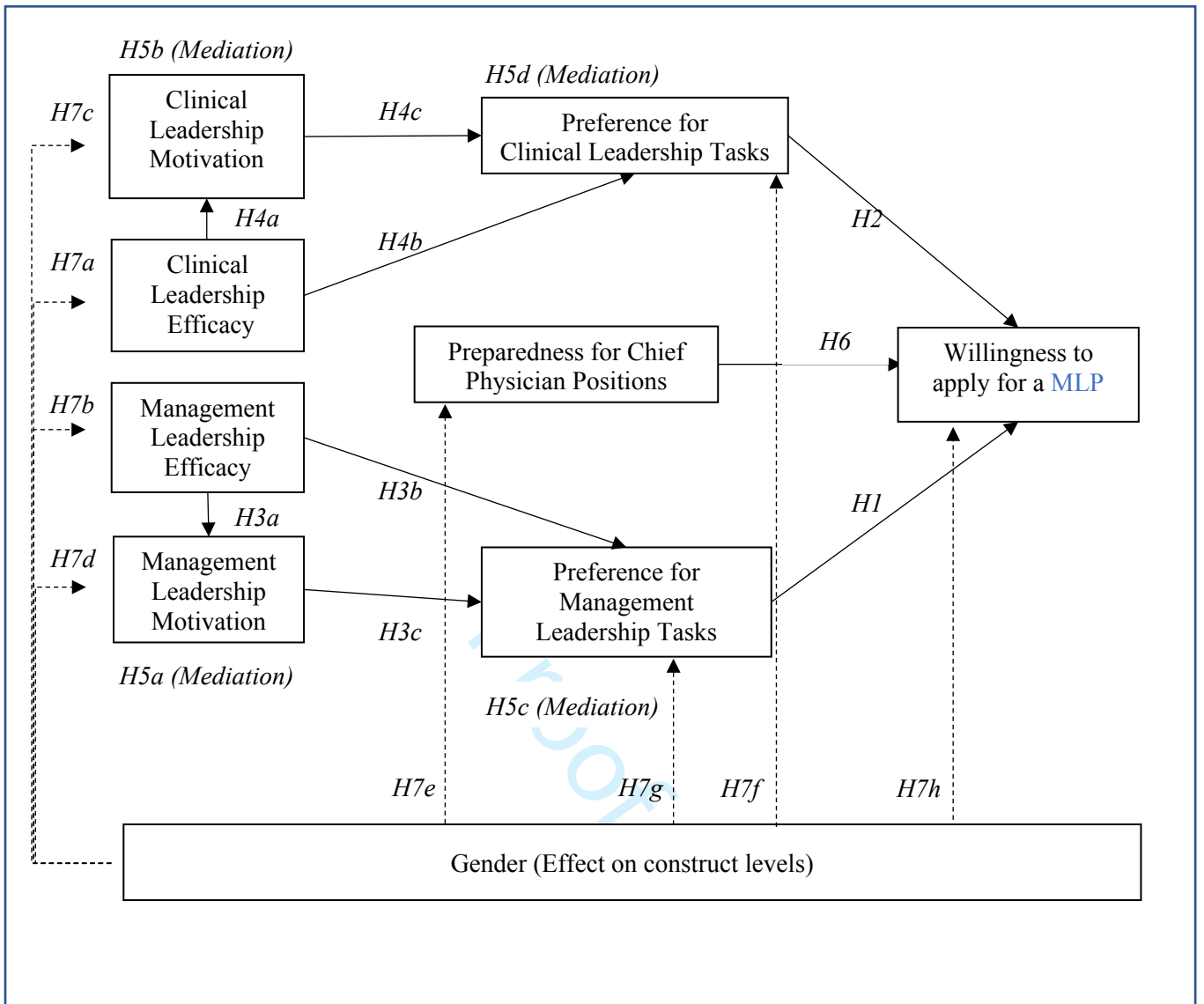


Table 1. Question items

Latent construct	Item
Management Leadership Motivation	I am ready to take on leadership responsibility whenever I get the opportunity. I am motivated to assume management responsibility for a department.
Clinical Leadership Motivation	I like being a specialist in my medical specialty. I appreciate the fact that I excel at my profession / that I am at the top of my chosen field of expertise. I am the kind of person who strives to be highly specialized in their field of expertise.
Management Leadership Efficacy	Optimizing the processes of an organizational unit. Assuming leadership responsibility. Assuming financial responsibility. Changing organizational structures.
Clinical Leadership Efficacy	Being a recognized specialist in my field. Continuing my education and staying up-to-date with medical expertise. Conducting medical research at an international level. Passing on my knowledge in publications and lectures.
Preference for Management Leadership	I can well imagine being more involved in leadership and management tasks in the future. My highest career goal is for me, as a leader, to oversee a department. My highest career goal is for me, as an executive, to run a hospital.
Preference for Clinical Leadership	My career goal is to be a recognized specialist in my medical specialty. I see myself as someone who is constantly expanding his or her medical skills in the field.
Preparedness for a MLP as Chief-physician	How much do you feel prepared by your current superior for a nonuniversity chief medical position?
Willingness to Apply for a MLP as Chief- physician	How attractive do you personally consider the career path of the chief-physician?

Physicians' preference for medical leadership positions

Table 2. Descriptive Statistics and Reliability and Validity Indicators

	Total Mean (SD)	Female Mean (SD)	Male Mean (SD)	α	C.R.	AVE	Fornell- Larcker Ratio
Willingness to Apply for a MLP as chief physician	3.31 (1.31)	2.75 (1.37)	3.59 (1.91)	-	-	-	-
Management Leadership Efficacy	3.83 (.84)	3.82 (0.73)	3.83 (0.68)	.83	.89	.66	.68
Management Leadership Motivation	4.07 (.93)	4.11 (0.79)	4.06 (0.81)	.69	.86	.76	.64
Preference for Management Leadership	3.17 (1.20)	3.09 (0.92)	3.21 (0.98)	.72	.84	.64	.60
Preference for Clinical Leadership	4.50 (.67)	4.52 (0.62)	4.48 (0.59)	.75	.87	.77	.62
Clinical Leadership Efficacy	3.96 (.89)	3.95 (0.74)	3.96 (0.62)	.75	.83	.55	.74
Clinical Leadership Motivation	4.38 (.77)	4.42 (0.62)	4.36 (0.63)	.73	.85	.65	.68
Preparedness for Chief- physician Positions	2.71 (1.13)	2.54 (1.36)	2.80 (1.12)	-	-	-	-

Notes. SD = standard deviation. α = Cronbach's alpha. C.R. = composite reliability. "Willingness to Apply for a MLP as chief physician" and "Preparedness" are single-item measures.

Physicians' preference for medical leadership positions

Table 3. Results of the PLS SEM Analysis (Total Sample)

	Clinical Leadership Motivation (R ² = .21)	Clinical Leadership Preference (R ² = .47)	Management Leadership Motivation (R ² = .31)	Management Leadership Preference (R ² = .28)	Willingness to Apply for MLP as chief physician (R ² = .24)
Clinical leadership Efficacy	.474***	.393***			-.093*
Clinical leadership Motivation		.404***			-.086 ^{ns}
Clinical leadership Preference					.060 ^{ns}
Management Leadership Efficacy			.554***	.191***	.005 ^{ns}
Management Leadership Motivation				.398***	.004 ^{ns}
Management Leadership Preference					.412***
Preparedness					.175***

Notes. The calculation of the significance levels is based on 5,000 bootstrap runs. * p < .10, *** p < .01, ns = not significant.

Physicians' preference for medical leadership positions

Table 4. Mediation Analysis (Specific Indirect Effects)

	Indirect Effect	SD	t Statistics	p Values
Management Leadership Efficacy → Management Leadership Motivation → Willingness to Apply for a MLP as chief physician	.00	.03	.09	.93
Management Leadership Efficacy → Preference for Management Leadership → Willingness to Apply for a MLP as chief physician	.08	.03	3.17	.00
Management Leadership Efficacy → Management Leadership Motivation → Preference for Management Leadership → Willingness to Apply for a MLP as chief physician	.09	.02	5.31	.00
Clinical Leadership Efficacy → Preference for Clinical Leadership → Willingness to Apply for a MLP as chief physician	.02	.02	1.09	.28
Clinical Leadership Efficacy → Clinical Leadership Motivation → Preference for Clinical Leadership → Willingness to Apply for a MLP as chief physician	.01	.01	1.00	.32
Clinical Leadership Efficacy → Clinical Leadership Motivation → Willingness to Apply for a MLP as chief physician	-.04	.03	1.47	.14
Management Leadership Efficacy → Management Leadership Motivation → Preference for Management Leadership Tasks	.22	.03	6.75	.00
Clinical leadership Efficacy → Clinical Leadership Motivation → Preference for Clinical Leadership	.19	.03	6.43	.00

Physicians' preference for medical leadership positions

Table 5. Gender-specific Group Analysis (Path Coefficients and Path Size Differences)

	Paths (Females)	Paths (Males)	p Values (Females)	P Values (Males)	Path Coefficient Differences	p (Path Coefficient Differences)
Management Leadership Efficacy → Willingness to Apply for a MLP as chief physician	.020	-.003	.744	.945	.023	.434
Management Leadership Efficacy → Management Leadership Motivation	.620	.522	.000	.000	.098	.095
Management Leadership Efficacy → Management Leadership Preference	.361	.119	.000	.047	.242	.015
Management Leadership Motivation → Willingness to Apply for a MLP as chief physician	.077	.026	.292	.532	.050	.283
Management Leadership Motivation → Management Leadership Preference	.357	.413	.000	.000	.056	.703
Management Leadership Preference → Willingness to Apply for a MLP as chief physician	.393	.402	.000	.000	.009	.536
Clinical Leadership Preference → Willingness to Apply for a Chief-physician Position	.191	.059	.032	.219	.132	.100
Preparedness → Willingness to Apply for a MLP as chief physician	.166	.161	.018	.003	.005	.483
Clinical Leadership Efficacy → Willingness to Apply for a MLP as chief physician	.004	-.177	.942	.005	.181	.012
Clinical Leadership Efficacy → Clinical Leadership Motivation	.281	.442	.008	.000	.161	.922
Clinical Leadership Efficacy → Clinical Leadership Preference	.571	.436	.000	.000	.135	.038
Clinical Leadership Motivation → Willingness to Apply for a MLP as chief physician	-.287	.003	.011	.931	.290	.996
Clinical Leadership Motivation → Clinical Leadership Preference	.521	.352	.000	.000	.170	.056

Physicians' preference for medical leadership positions

Notes. Figures printed in boldface represent significant path coefficients and significant path coefficient differences. In PLS multigroup analysis, p values above .90 represent significant path size coefficient differences.

Proof



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